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***Today's Webinar is:***  
**Assessment of Effort and Validity in Neuropsychological Testing:  
The Importance of Determining Symptom Credibility**

July 17, 2013, 1-2:30p.m. EDT

***Presenters***

**Wesley R. Cole, Ph.D.,**

Senior Scientific Director DVBIC, Neuropsychologist, Department of Brain Injury  
Medicine, Womack Army Medical Center, Fort Bragg, N.C.

**Robert Stegman, Ph.D.,**

Clinical Neuropsychologist, Department of Brain Injury Medicine, Womack Army Medical  
Center, Fort Bragg, N.C.

***Moderator***

**Douglas B. Cooper, Ph.D., ABPP-CN**

Research Neuropsychologist, DVBIC, San Antonio Military Medical Center, Texas



# Continuing Education

This webinar has been approved for the following:

- 1.5 AMA PRA Category 1 Credits™
- 1.5 Credits by the American Psychological Association
- 1.5 Nursing contact hours as a co-provider with the American Nurses Credentialing Center
- 1.75 CE Contact hours for Physical Therapist and Assistant approved by the State of Illinois
- 1.75 CE Contact hours for Occupational Therapist and Assistant approved by the State of Illinois
- 1.5 CEHs for Social Work approved by the Missouri Division of Professional Registration Committee for Social Work

*Please note that DVBIC's awarding of continuing education credit is limited in scope to health care providers who actively provide psychological health and traumatic brain injury care to U.S. active-duty service members, reservists, National Guardsmen, military veterans and/or their families.*



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# Continuing Education Credit

If you pre-registered for this webinar and want to obtain a continuing education (CE) certificate, you must complete the online CE evaluation.

- If you meet the eligibility requirements and pre-registered on or before 11:59 p.m. EDT on July 14, 2013, please visit [conf.swankhealth.com/dvbic](http://conf.swankhealth.com/dvbic) to complete the online CE evaluation and download your CE certificate.
- **The Swank HealthCare website will be open through Wednesday, July 24, 11:59 p.m. EDT**
- If you did not pre-register, you will not be able to receive CE credit for this event.

For full accreditation information, visit [DVBIC.org](http://DVBIC.org) and click on “Medical Providers” to access the Monthly Webinar Series. It is the responsibility of the participant to understand his or her board’s continuing education requirements.



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# Warrior Resilience (Virtual) Conference V



DCoE is proud to announce the Fifth Annual Warrior Resilience Conference on August 12-16, 2013 as a virtual training event.

This cross-service training, including National Guard and Reserve, will focus on resilience and the prevention and treatment of combat and operational stress injuries to optimize performance and enhance physical and psychological resilience.

Sessions will also focus on mind-body-spirit, sleep, and provide training and education in combat and operational stress control.

Continuing education credit will be available for attending this virtual conference.

The WRC-V primary audience is line leaders and care providers including both clinicians and chaplains.

August						
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4	5	6	7	8	9	10
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25	26	27	28	29	30	31

**Watch for registration to open  
Mid-July 2013**

**For more information email  
[wrc@experient-inc.com](mailto:wrc@experient-inc.com)**



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# Save the Date

Next DVBIC Webinar:

## *ICD-9-Clinical Modification (CM) Coding Guidance for Traumatic Brain Injury within the Military Health System*

July 31, 2013  
1-2:30 p.m. EDT

July						
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28	29	30	31			

For more information, visit [dvbic.org/online-education](http://dvbic.org/online-education)



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# Additional Webinar Details

This presentation audio will be available online beginning August 1, 2013 at [dvbic.org/online-education](http://dvbic.org/online-education)

Please take the [Interactive Customer Evaluation](#).

The screenshot shows the 'Interactive Customer Evaluation' (ICE) form. At the top, there is a navigation bar with 'ICE Interactive Customer Evaluation' and links for 'Home', 'About ICE', 'Manager Login', and 'Help'. Below this is a 'Service Provider Search' field. The main heading is '2013 Defense and Veterans Brain Injury Center (DVBIC) Webinar Series Comment Card'. A paragraph explains that the questionnaire allows users to provide feedback on their awareness and satisfaction with the 2013 DVBIC Webinar Series, noting that all questions are optional. A link for 'Information about this service provider (FAQs, Events, Contacts, Links)' is provided. The form contains several sections: 'Are you currently a...' with a dropdown menu; 'Are you a health care provider?' with radio buttons for Yes, No, and N/A; 'What discipline? If no, please answer not applicable.' with a dropdown menu; 'Did you pre-register for the webinar?' with radio buttons for Yes, No, and N/A; 'Did you receive continuing education for this webinar?' with radio buttons for Yes, No, and N/A; 'As a result of attending this webinar, I will use the information learned for professional use.' with a dropdown menu; 'As a result of attending this webinar, I will seek more information about this topic.' with a dropdown menu; 'Would you recommend this webinar to others?' with radio buttons for Yes, No, and N/A; 'Please describe other webinar topics you would like DCoE to offer.' with a text input field; 'Customer Service:' with a table of ratings for Facility Appearance, Employee/Staff Attitude, Timeliness of Service, and Hours of Service, each with radio buttons for Excellent, Good, OK, Poor, Awful, and N/A; 'Did the product or service meet your needs?' with radio buttons for Yes, No, and N/A; 'Satisfaction:' with a question 'Were you satisfied with your experience at this office / facility?' and radio buttons for Yes, No, and N/A; and 'Comments & Recommendations for Improvement: (up to 4000 characters) (optional)' with a text input field.

ICE Interactive Customer Evaluation

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2013 Defense and Veterans Brain Injury Center (DVBIC) Webinar Series Comment Card

This questionnaire allows you to tell us more about your awareness and satisfaction with the 2013 DVBIC Webinar Series. All questions are optional and some may not be applicable to your experience. Thank you for your participation.

Information about this service provider (FAQs, Events, Contacts, Links)

Are you currently a [N/A]

Are you a health care provider? ☐ Yes ☐ No ☐ N/A

What discipline? If no, please answer not applicable. [N/A]

Did you pre-register for the webinar? ☐ Yes ☐ No ☐ N/A

Did you receive continuing education for this webinar? ☐ Yes ☐ No ☐ N/A

As a result of attending this webinar, I will use the information learned for professional use. [N/A]

As a result of attending this webinar, I will seek more information about this topic. [N/A]

Would you recommend this webinar to others? ☐ Yes ☐ No ☐ N/A

Please describe other webinar topics you would like DCoE to offer. [Text Input]

Customer Service:

Facility Appearance	<input type="radio"/> Excellent	<input type="radio"/> Good	<input type="radio"/> OK	<input type="radio"/> Poor	<input type="radio"/> Awful	<input type="radio"/> N/A
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Did the product or service meet your needs? ☐ Yes ☐ No ☐ N/A

Satisfaction:

Were you satisfied with your experience at this office / facility? ☐ Yes ☐ No ☐ N/A

Comments & Recommendations for Improvement: (up to 4000 characters) (optional)

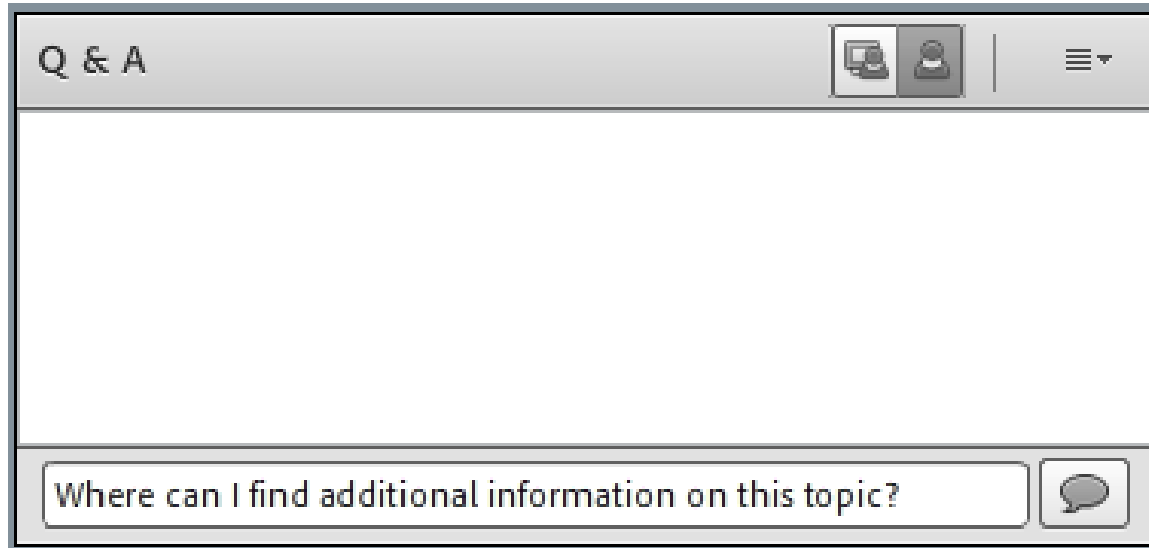


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# Additional Webinar Details

Please submit your questions *throughout the presentation* using the Q & A box located on your screen.

A screenshot of a Q & A interface. The top bar is grey and contains the text "Q & A" on the left, two icons (a monitor and a person) in the center, and a menu icon on the right. Below this is a large white rectangular area for questions. At the bottom, there is a text input field with the placeholder text "Where can I find additional information on this topic?" and a speech bubble icon to its right.

The presenters will answer as many questions as possible following the presentation.



# Additional Webinar Details

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**Audio will not be provided via Adobe Connect or DCO.**

**Please use the following dial-in information to access the audio portion of the webinar.**

***U.S. 888-469-0695  
Participant Passcode: DCOE***

***Outside U.S. 517-308-9199  
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# Webinar Topic Overview

One of the issues that providers face when treating someone with TBI is determining the credibility of the patient's symptoms. Unfortunately, there are some service members with mild TBI who feign or exaggerate symptoms. This poses a number of challenges, including how to determine if a patient is credible, how to reconcile differences in clinical standards, how to overcome disagreements between clinicians and how to deal with a potentially unpleasant interaction with the patient.

The goal of this presentation is to educate health care providers about the standard of practice for symptom validity testing. We will illustrate the importance of a data-driven, objective approach to assess the credibility of symptoms. We will use several case examples from a concussion care clinic.



# Speaker



Dr. Cole received a bachelor's degree in psychology from James Madison University. He earned a master's degree and doctorate in clinical psychology from the University of South Carolina. After moving to Baltimore, Dr. Cole completed pre-doctoral internships and postdoctoral fellowships in pediatric psychology and neuropsychology at the Kennedy Krieger Institute, an affiliate of the Johns Hopkins School of Medicine. He worked for a year at the Kennedy Krieger Institute's Department of Neuropsychology. In 2008, he accepted a job at the Womack Army Medical Center's Concussion Care Clinic. Looking to expand his roles into research activities, he joined the DVBIC at Fort Bragg, in 2009. He continues to divide his time, conducting neuropsychological assessments in the Concussion Care Clinic and overseeing DVBIC research at Fort Bragg.

Wesley R. Cole, Ph.D.  
Senior Scientific Director, DVBIC  
Neuropsychologist, Department of  
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# Speaker



Robert Stegman, Ph.D.  
Clinical Neuropsychologist,  
Department of Brain Injury  
Medicine  
Womack Army Medical Center,  
Fort Bragg, N.C.

Dr. Stegman was on active duty in the enlisted ranks from 1964 through 1972, mostly in Southwest Asia. He earned a bachelor's degree in psychology from Purdue University and received his master's and doctoral degrees from the University of Missouri – Columbia. Dr. Stegman completed his internship at the Indiana University School of Medicine where he developed a professional interest in neuropsychology. He worked for the Department of Veterans Affairs (VA) from 1980 through 2008. His clinical duties focused on posttraumatic stress disorder and neuropsychology and included thousands of disability/forensic assessments.

Dr. Stegman was the Accreditation Site Visitor for the American Psychological Association. He was active in the development of competencies for psychologists. Dr. Stegman also was the chairperson of the Doctoral Membership Review Committee for the Association of Psychology Postdoctoral and Internship Centers. He left the VA and resigned from national professional activities to work in the Department of Brain Injury Medicine at Womack Army Medical Center.

# Disclaimer

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**The views expressed in this presentation are those of the presenters and moderator and do not reflect the official policy of the Department of Defense, Department of Veterans Affairs or the U. S. Government.**

**We do not have a relevant financial relationship to disclose, and we do not intend to discuss an off-label/investigative use of a commercial product.**



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# Three Primary Questions

- 1) Is symptom credibility a problem facing providers in military treatment facilities?
- 2) Why is assessment of symptom credibility important?
- 3) How is symptom credibility assessed?



# Polling Question 1

Do you feel you currently have a firm grasp on how to assess the credibility of a patient's symptoms and clinical presentation?

A. Yes

B. No



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# Learning Objectives

1. Establish a stronger grasp on the issue of patient's exaggerating or faking symptoms.
2. Describe the difficulty of evaluating the credibility of a patient's presentation.
3. Demonstrate an understanding and appreciation of the value of a data driven, scientific approach to assessing credibility of symptom reports that minimizes the professionals' subjectivity.
4. Identify the standard of care for assessment of credibility, especially in neuropsychological (NP) evaluations.
5. For non-neuropsychologists, recognize what keywords or sections should be included in a NP evaluation report regarding assessment of effort and symptom credibility.







## **Question 1**



**Is symptom credibility a problem facing providers in military treatment facilities?**

# Are we talking about Malingering?

- **Malingering** – the intentional production of false or exaggerated symptoms, motivated by external incentives
  - Malingering is just one possible cause of invalid performance
  - Exaggeration is core to malingering, but is not synonymous with malingering
  - Some psychological disorders are associated with symptom exaggeration\*\*\*

(Carone, Iverson, & Bush, 2010)



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# The Issue of Intent

- Malingering implies intent
  - Deliberate and conscious exaggeration or feigning by the participant
- Converging evidence with established secondary gain is necessary for a high degree of clinical certainty to make this diagnosis
- It is best to “Get outside of the head” (provider and patient) and take an approach to assessment similar to legal prosecution
- BLUF: Be guided by objective data



# Overview of Terminology

- Non-credible
- Valid/ Invalid
- Effort
- Response bias
- Non-interpretable
- Level of investment
- Ability to stay motivated

## Other important terms:

- Performance Validity Tests (PVTs)
- Symptom Validity Tests (SVTs)



## Polling Question 2

What would you estimate is the rate of non-credible test performance in individuals involved in litigation related to sustaining a concussion/ mTBI?

- A. 25%
- B. 33%
- C. 40%
- D. 50%



# What are the rates?

Varies based on method of assessment and population assessed.

~40% of mild TBI (mTBI) litigants meet criteria for probable malingering (i.e. non-credible).

Scores on NP tests in individuals with mTBI are similar to individuals with moderate and severe TBI, however, once you remove individuals deemed non-credible mTBI scores are within normal limits.



(Mittenberg et al., 2002; Larrabee, 2002; Larrebee, 2012)



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# Rates from Womack Army Medical Center

- Concussion Care Clinic
  - Individuals with mTBI are referred for NP evaluation if symptomatic for 30+ days
  - 1 in 3 fail two or more PVTs
- In a sample of over 200 patients receiving comprehensive NP evaluations (moderate to severe TBI, positive radiological findings, and history of ADHD or learning disability excluded)
  - 33% → 2+ PVTs failed
  - 17% → 3+ PVTs failed



# Polling Question 3

Do you feel the rates of non-credible test performance at Womack are lower, higher, or similar to rates of non-credible performance at your site/ practice?

- A. Lower
- B. About the same
- C. Higher





# Why exaggerate or fake?!

- **Financial Gain**
  - Disability benefits
  - Injury settlements
- **Other incentives or factors:**
  - Avoiding criminal prosecution
  - Special consideration
  - Avoiding responsibilities (duty or deployment)
  - Obtaining medication
  - Psychological - Assuming the sick role (i.e. Factitious Disorder)

# Is all non-credible performance deliberate?

## Somatoform Disorders

Physical manifestations of psychological distress. Symptoms either do not make physiological sense or result in functional impairments in excess of what would physiologically be expected. Symptoms are not deliberately produced or exaggerated.

- Emerging idea of Cogniform Disorder

However....

Current research does not support Somatoform Disorders as a cause of non-credible presentation in a neuropsychological evaluation.



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## **Question 2**

-----  
**Why is assessment of symptom  
credibility important?**

# Why this is necessary?

- The rates speak for themselves
- National Academy of Neuropsychology Position Paper
  - “Assessment of response validity, as a component of a medically necessary evaluation, is medically necessary.” –Bush et al.
- Accurate conclusions are based on the assumption of good data
  - “An examiner should no more accept unquestioningly a self-report of poor memory following mTBI than uncritically accept a patient’s self-report of normal memory functioning during a dementia evaluation.” –Lezak et al.

(Bush et al., 2005; Lezak et al., 2012)



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# Iatrogenesis

- Adverse effect or complication resulting from treatment
- If treating something that's not there, the patient is at risk for iatrogenic effects
- Symptoms may worsen, additional symptoms are reported, etc.
- There is risk the disorder becomes their identity
- Uncomplicated mTBI is the “perfect set up for iatrogenic disability” -Larrabee

(Larrabee, 2012)



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# The Daubert Decision (1993)

- Court decision that set a new standard for the admissibility of scientific testimony
- The Court defined “scientific methodology”:
  1. Empirical testing: whether the theory or technique is falsifiable, refutable, and / or testable.
  2. Whether it has been subjected to peer review and publication.
  3. The known or potential error rate.
  4. The existence and maintenance of standards and controls concerning its operation.
  5. The degree to which the theory and technique is generally acceptable by a relevant scientific community.

(Imwinkelreid, 1993)

# What about clinical judgment?

- Three Factors that limit clinical judgment:
  - It's difficult WITH test data
  - Confirmatory bias and attribution error
  - Tendency of examiners to overestimate their capacity when they feel they have rapport with the patient

As many as 80-90% of factitious reports of trauma may be missed by care providers.

(Stegman & Blanford, 1991)



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## **Question 3**



**How is symptom credibility assessed?**



# In a nutshell...

“...an approach that involves multiple methods at multiple points in time is typically required in order to obtain a sufficient understanding of the validity [i.e. credibility] of the examinee’s symptoms and performances.” –Bush et al.

(Bush et al., 2005)



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# Guidelines for Evaluating the Credibility of Data

Concluding credible data is based on:

1. Evidence of *consistency* in the history.
2. Likelihood symptoms and test profile makes medical sense.
3. In depth understanding of the patient's present situation, personal and social history, and emotional predispositions.
4. Emotional reactions to their symptoms and complaints.

(Lezak et al., 2012)



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# Additional Guidelines

## Other guidelines for determining credibility:

1. Requires careful analysis by the examiner.
2. Based on objective criteria.
3. Incorporates indicators that have established cutoffs (i.e. PVTs and SVTs).
4. Combines clinical judgment with the results of scientifically validated measures.

(Heilbronner et al., 2009)



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# Evaluating Consistency

- Self-reported history → Documented history
- Reported symptoms → Physiology
- Reported symptoms → Observations
- Reported symptoms → Collateral report
- Reported symptoms → Functional skills
- Reported symptoms → Disease course
- Reported symptoms → Test results
- Test results → Physiology
- Test results → Previous test results



# Symptom Validity Tests (SVTs)

- This term is often (incorrectly) used interchangeably with Performance Validity Tests
- However, SVTs refer to:
  - Measures that allow the determination if a patient's reported symptoms are an accurate measure of their actual symptom experience
  - Measures that identify the validity of self-report via assessment of response bias
  - May be disorder-specific inventories or embedded within personality inventories (e.g. validity scales in the MMPI (Minnesota Multiphasic Personality Inventory)-2 and MMPI-2-RF)



# Performance Validity Tests (PVTs)

“You have to try hard NOT to do well on these tests” - Larrabee

**Freestanding** - A test that *looks* like a standard test of cognitive functioning, though actually assesses effort. Cutoffs are established through research and development. Minimally adequate effort is sufficient to hit cutoff scores.

**Embedded** – Scores derived from tests of cognitive functioning with cutoffs to indicate minimally adequate effort.

(Larrabee, 2012)



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# PVTs: Not Always Cognitive

- Other disciplines have measures of assessing effort including:
  - Neurology
  - Physical Therapy
  - Occupational Therapy
  - Vision and Hearing
  - Speech and Language Pathology

Even without formal PVTs, providers can identify if testing aligns with reported symptoms, clinical history, and known physiology.



# Name The Color

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I will show you one of two markers, a red one and a blue one.

When prompted, name the color of the marker you just saw.



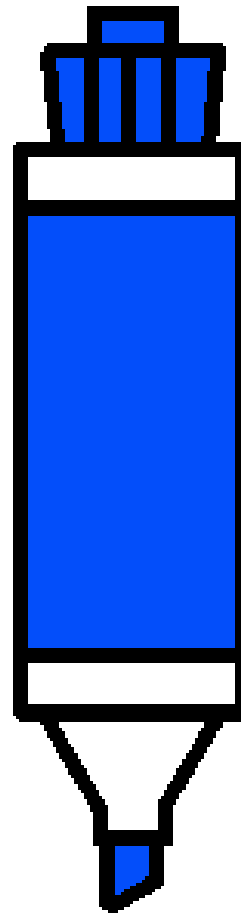


# Ready?



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# What Color?



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# What Color?



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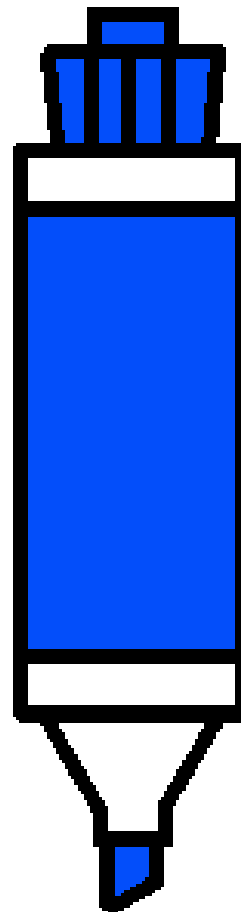


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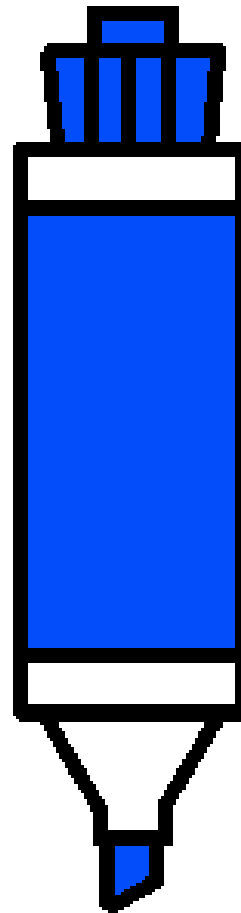


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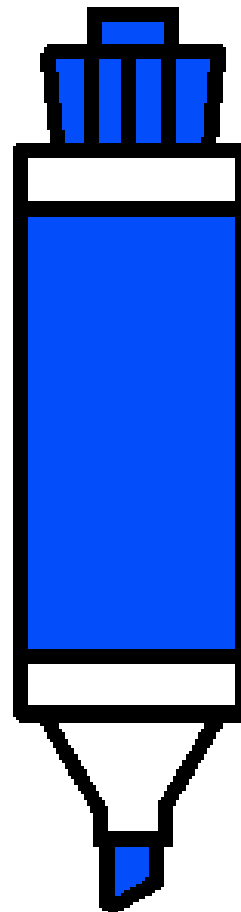


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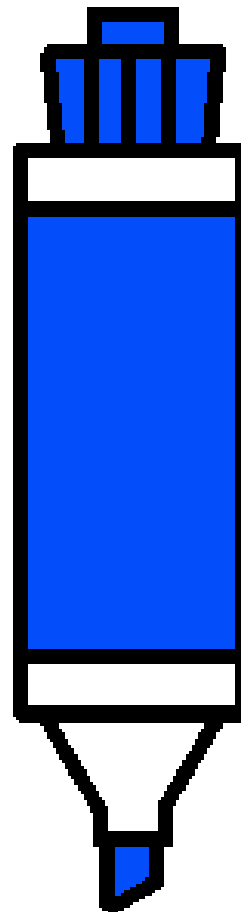


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# End



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# Name The Wrong Color

I will show you one of two markers, a red one and a blue one.

When prompted, name the **WRONG** color of the marker you just saw. That is, say “red” for the blue marker and “blue” for the red marker.



# Ready?



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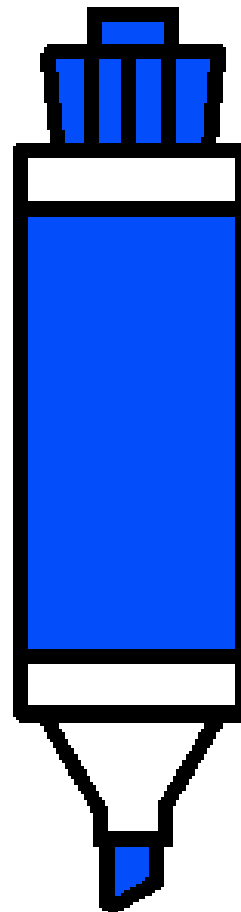


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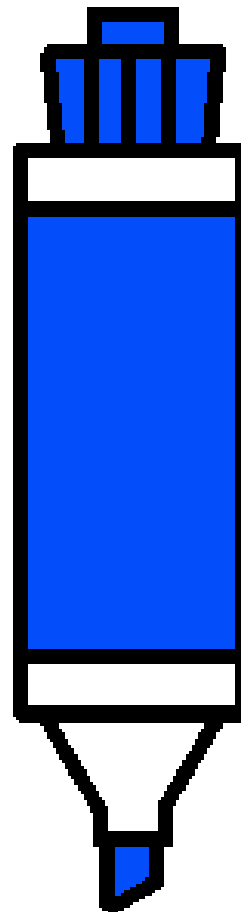


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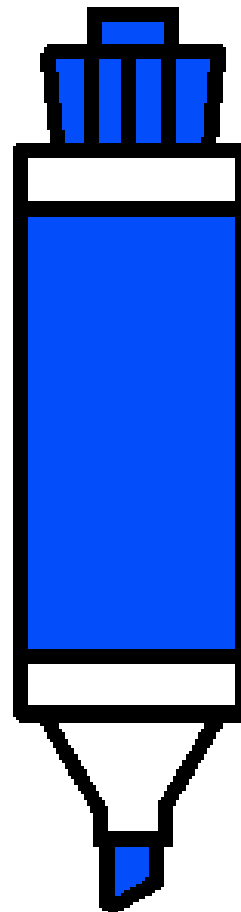


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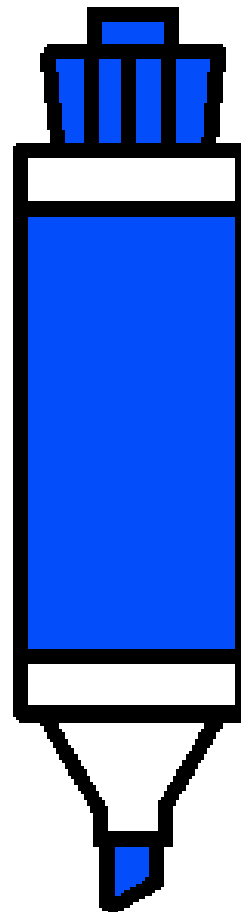


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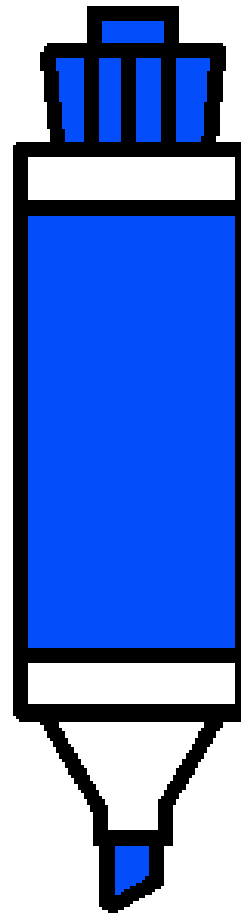


# What Color?



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# What Color?



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# End



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# Name the Color – But Fake Impairment

I will show you one of two markers, a red one and a blue one. When prompted, name the color of the marker you just saw.

HOWEVER...

I want you to miss 3 of the items. Try to miss the items at seemingly random times. That is, don't miss them all in a row or only miss one color. In other words, you don't want to look like you're TRYING to miss 3 items.



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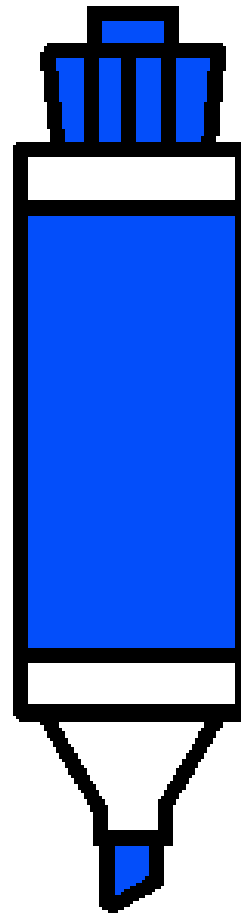


# Ready?



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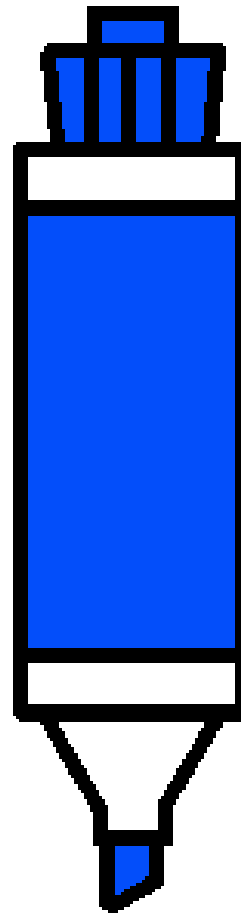


# What Color?



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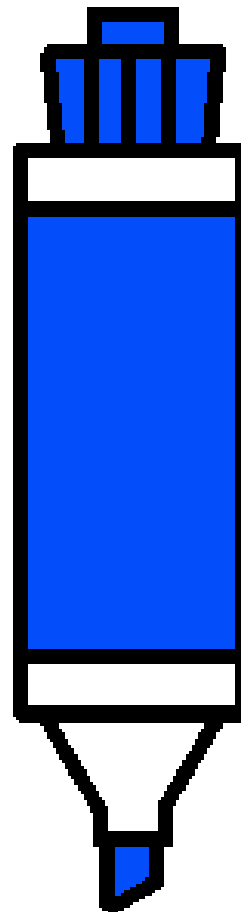


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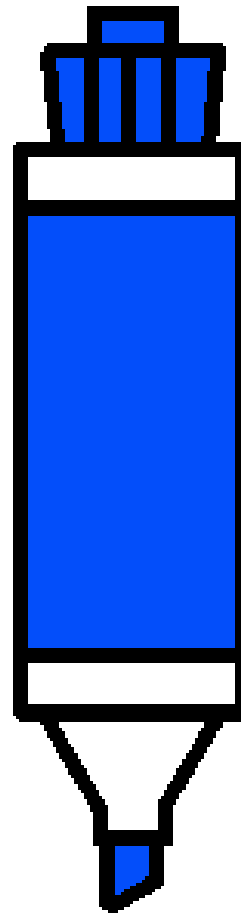


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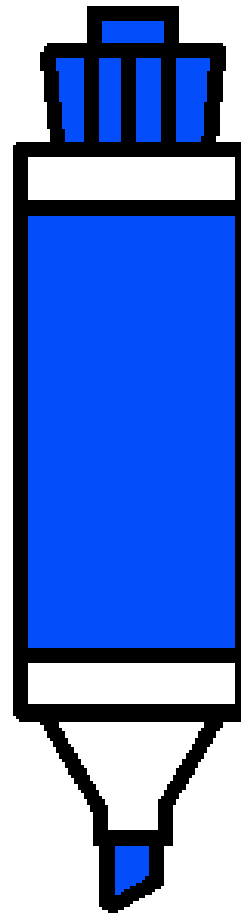


# What Color?



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# End



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DVBIC  
DEFENSE AND VETERANS  
BRAIN INJURY CENTER

# Thoughts...

Did it take more effort to name the opposite color than the correct color?

How much mental effort did it take to miss the items while trying to be random about it?

- What does that say about the cognitive capacity of someone who deliberately performs poorly?

What would be your likely score if you kept your eyes closed during the test?

- What does that say about individuals putting forth less than chance performance?



# How are PVTs used clinically?

- Administered as part of a battery of tests
- Multi-method approach is recommended
- They should not be interpreted outside of the context of clinical history and other test results
- Tests are like thermometers: positive findings suggest a problem is present, negative findings do not rule out a problem

(Lezak et al., 2012)



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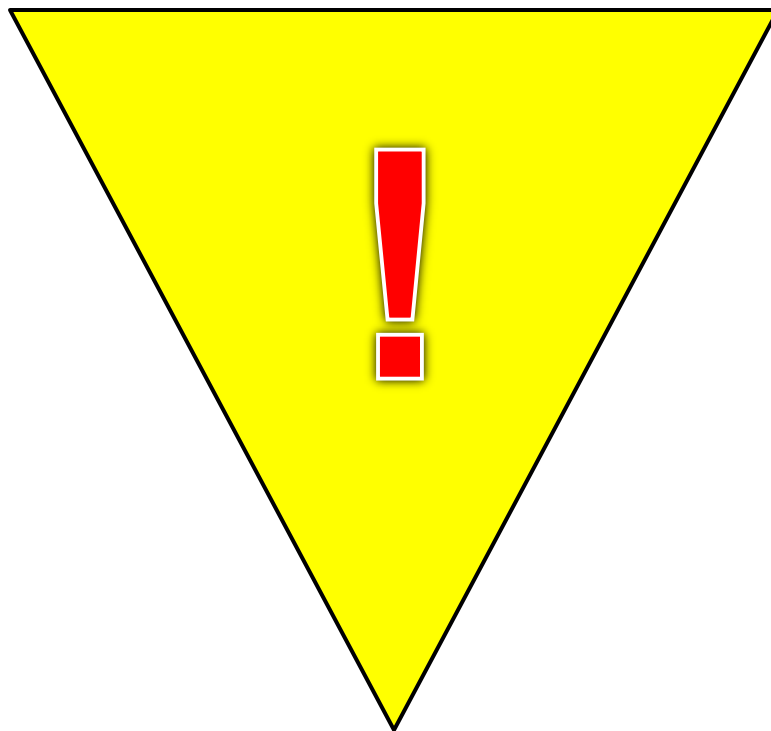


# About the cutoff scores...

- The tests are designed to measure statistical deviations from expected performance patterns and/or response inconsistencies
- Cutoffs are set using:
  - healthy subjects instructed to feign
  - patients at increased risk of feigning
  - patients who fit criteria for non-credible or inconsistent performance
  - comparison to other well established PVTs

# WARNING!

## Discussion of Statistics Ahead



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# Sensitivity and Specificity

## **Sensitivity** – “Fishing Net”

You “catch” as many as possible with the condition.

The chance of HAVING the diagnosis if the test is positive.

## **Specificity** – “Fishing Pole”

Those without the condition are not “caught”.

The chances of NOT having the diagnosis if the test is negative.

**Goal:** Establish a cutoff score with 90% specificity while maximizing sensitivity.



# Predictive Power

- **Positive Predictive Power (PPP)**

- The probability of the diagnosis given a positive result (ratio of true positives to all positive test results)

- **Negative Predictive Power (NPP)**

- The probability of no diagnosis given a negative result (ratio of true negatives to all negative test results)

		Condition - Present?	
		YES	NO
Test Result Positive?	YES	True Positive	False Positive
	NO	False Negative	True Negative

# Predictive Power (cont.)

PPP and NPP are base rate dependent – that is, they take into account the frequency of a condition in the diagnostic setting.

- $$PPP = \frac{\text{Sensitivity} * \text{Base rate}}{(\text{Sensitivity} * \text{Base rate}) + (1 - \text{Sens} * 1 - \text{Base Rate})}$$

- $$NPP = \frac{\text{Specificity} * (1 - \text{Base rate})}{(\text{Specificity} * 1 - \text{Base rate}) + (1 - \text{Spec} * \text{Base Rate})}$$



# PPP and NPP example

- PVT: 90% specificity and 84% sensitivity
- Clinic: Base rate of 33% non-credible

$$\text{PPP} = \frac{.84 * .33}{(.84 * .33) + (.16 * .67)} = .721$$

72% chance of having the condition with a positive test result

$$\text{NPP} = \frac{.90 * .67}{(.90 * .67) + (.10 * .33)} = .952$$

95% chance of NOT having the condition with a negative test result

# PPP and NPP example (cont.)

**PPP = .72**

**NPP = .95**

		Condition - Present?	
		YES	NO
Test Result Positive?	YES	72%	28%
	NO	5%	95%



# The strength of multiple measures

There is a fairly high rate of one failed PVT in credible examinees.

- Only one measure does not afford diagnostic certainty.

Combining measures increases the predictive value.

- With clinically appropriate sensitivity and specificity, clinicians can reach almost absolute certainty with as few as 2-3 measures.

One should minimize the use of redundant PVTs to strengthen predictions.



# Clinically using multiple measures

- Different researchers suggest different criteria (e.g. Slick; Larrabee; Boone)
- “Slick criteria” – Two or more failed PVTs
- Three failed PVTs is uncommon (<1%) with credible examinees (Boone; Larrabee)
- Four or more failed PVTs is not known to occur with credible examinees
- One PVT below chance is the “smoking gun” of effort assessment (Larrabee)
- REMEMBER: passing PVTs is not an assurance of credibility

(Slick et al., 1999; Boone, 2007; Larrabee, 2012)



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# Polling Question 4

If you currently use PVTs or other methods to assess credibility, how many indicators (e.g. failed tests) do you require before concluding invalid/ non-credible data?

- A. 1
- B. 2
- C. 3
- D. 4 or more





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# Case Examples

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# Case Example #1

**Demographics:** Male, 22-years old

**Injury:** Moderate TBI

**Radiological:** Positive Findings

**Other:** Cortical blindness, 38 degrees of vision in one eye

**Neurocognitive:** Average to low average scores

---

**PVTs:** Cutoffs met on 7 of 7 PVTs



# Case Example #2

**Demographics:** Male, 27-years old

**Injury:** Penetrating TBI (GSW)

**Radiological:** Positive Findings

**Other:** Bullet lodged in lower right occipital lobe

**Neurocognitive:** Most WNL, some limitations in attention and memory functioning

---

**PVTs:** Cutoffs met on 7 of 7 PVTs



# Case Example #3

**Demographics:** Male, 27-years old

**Injury:** mTBI

**Radiological:** Unremarkable

**Other:** Minimal functional impairment

**Neurocognitive:** Scores in impaired ranges

---

**PVTs:** Failed to meet cutoffs on 7 of 7  
PVTs



# Case Example #4

**Demographics:** Female, 36-years old

**Injury:** mTBI

**Radiological:** Unremarkable

**Other:** Minimal functional impairment

**Neurocognitive:** Scores in impaired ranges

---

**PVTs:** Failed to meet cutoffs on 7 of 7  
PVTs



# Case Example #5

**Demographics:** Male, 26-years old

**Injury:** AVM with surgical correction

**Radiological:** Positive

**Other:** Migration of embolism glue

**Neurocognitive:** Scores ranged from WNL to impaired

---

**PVTs:** Cutoffs met on 7 of 7 PVTs

AVM-arteriovenous malformation



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# Case Example #6

**Demographics:** Male, 49-years old

**Injury:** mTBI

**Radiological:** Negative

**Other:** Eval in late 2009

**Neurocognitive:** IQ was WNL, other scores were borderline to “profound impaired”

---

**PVTs:** Failed to meet cutoffs on 7 of 7 PVTs



# Case Example #6 (cont.)

**Demographics:** Male, 49-years old

**Injury:** mTBI

**Radiological:** Negative

**Other:** Eval in late 2010 (approx. 12 months after initial eval)

**Neurocognitive:** All scores WNL

---

**PVTs:** Cutoffs met on 7 of 7 PVTs



# Case Example Summary

- Though seemingly extreme case examples, these are not unusual cases
- Individuals with identified impairments and moderate, severe, or penetrating TBI can pass PVTs
- Individuals failing PVTs often score in the impaired ranges on Neurocognitive tests
  - This is typically not consistent with observed or reported functional abilities.



# Uh oh, my patient is non-credible. Now what?

- A valuable resource:

Carone, Iverson, & Bush (2010). A model to approaching and providing feedback to patients regarding invalid test performance in clinical neuropsychological evaluations. *The Clinical Neuropsychologist*, 24, 759-778

- Neuropsychologists have an ethical obligation to provide feedback
- Honest feedback can help avoid discomfort and prevent distortion of the meaning and clinical implications of the findings



# Phase 1: Develop Rapport

Rapport does not equal blind advocacy.

- Results cannot be known in advance
- Test results may not be consistent with the patient's views of their problems

Informing patients about effort testing

- Disagreements in the field about whether or not to be explicit about testing for effort to patients
- **Never okay to identify specific PVTs and SVTs**
- Generally acceptable to encourage best effort and let the patient know less than best effort could invalidate results



# Phase 2: Completing the Evaluation

If PVTs and SVTs administered early in testing indicate poor effort, what do you do?

- Continuing the evaluation can provide converging/ diverging evidence (“Patients may want to look impaired, but do not want to look dumb”)
- Ending early may lead to easy identification of effort tests

Hold preliminary discussions with the patient.

- Once testing is completed, determine if patient is willing to acknowledge poor effort
- Avoid accusatory or emotionally laden language (e.g. avoid “faking”, “lying”, etc. in favor of “stay motivated”, “fully invested”, “disengaged”)

(Carone et al., 2010)



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# Phase 3: Feedback

- Framed as a general conversation (e.g. “So how do you think you did?”)
- Describe how objective data guides conclusions.
- Comparisons to an impaired clinical group (e.g. Alzheimer’s). Graphs can aid presentation.
- Good news vs. Bad news approach
  - Bad news - Low scores, likely due to effort, and not consistent with clinical history.
  - Good news – Scores likely do not reflect actual abilities, like someone in an impaired clinical group. With improved effort and addressing non-neurological factors, scores will likely improve.

(Carone et al., 2010)



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# Other Important Issues

- If malingering is used during feedback or in a report, provide an adequate description/ definition to avoid any misperceptions:
  - Secondary gain must be established
  - Need converging evidence and a high degree of diagnostic confidence
  - Use probabilistic language suggested by Slick et al. (1999)
- Carone, Iverson, and Bush also discuss:
  - Handling conflict with patients
  - Handling complaints to oversight authorities
  - Alternative views of this issue



# Three Primary Questions

- 1) Is symptom credibility a problem facing providers in military treatment facilities?
- 2) Why is assessment of symptom credibility important?
- 3) How is symptom credibility assessed?



# Learning Objectives

1. Establish a stronger grasp on the issue of patient's exaggerating or faking symptoms.
2. Describe the difficulty of evaluating the credibility of a patient's presentation.
3. Demonstrate an understanding and appreciation of the value of a data driven, scientific approach to assessing credibility of symptom reports that minimizes the professionals' subjectivity.
4. Identify the standard of care for assessment of credibility, especially in neuropsychological (NP) evaluations.
5. For non-neuropsychologists, recognize what keywords or sections should be included in a NP evaluation report regarding assessment of effort and symptom credibility.

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# Acronyms

Arteriovenous malformation (AVM)

Attention deficit hyperactivity disorder (ADHD)

Gunshot Wound (GSW)

mild TBI (mTBI)

Minnesota Multiphasic Personality Inventory (MMPI)

Negative Predictive Power (NPP)

Neuropsychological (NP)

Performance Validity Tests (PVTs)

Positive Predictive Power (PPP)

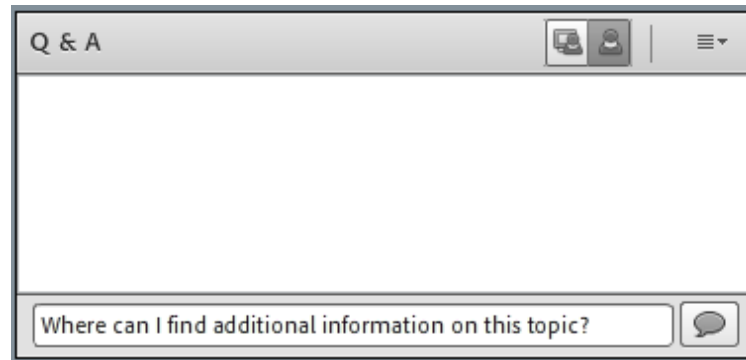
Symptom Validity Tests (SVTs)

Within Normal Limits (WNL)



# Question & Answer Session

- Submit questions via the Adobe Connect or Defense Connect Online question box located on the screen.



- The question box is monitored and questions will be forwarded to our presenters for response.
- We will respond to as many questions as time permits.



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Please take a moment to complete the [Interactive Customer Evaluation](#).

Your responses will help us to determine future topics, improve on the delivery and experience of the webinars, and to reach more of your colleagues.

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